

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Applicant(s): Ma Shipping   |                      |
| Application No.: 10/004,978   |                      |
| Filed: 12/3/2001  | Group Art Unit: 1711 |
| Title: Flame Retardant Resin Composition<br>and Molded Products Thereof | Examiner: I. Zemel   |
| Attorney Docket No.: GEPL.P-080   |                      |

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## REPLY BRIEF FOR APPELLANT

This brief is filed in support of Applicants' Appeal from the final rejection mailed 9/20/2004 and in response to the Examiner's Answer mailed November 15, 2005.

The Examiner identifies the rejections of claims 3, 12-15, and 20 as not under review. For clarity, Applicants did not argue these separately, but the reversal of the rejection of these claims is solicited along with the reversal of the base rejection of the claims on which these claims depend.

Applicants in their appeal brief argued that the combination of references was perhaps more plausible if the secondary reference (which Applicants submit is the closest prior art) was used as the primary reference. The Examiner refused to consider or respond to this argument, asserting that such a rejection was not of record. (Examiner's answer, Page 9). This position is anomalous given the repeated argument by the Examiner that the references must be considered as a combination, and not individually.<sup>1</sup> Furthermore, since the standard of obviousness is what the art as a whole suggests, the reference which serves as the primary reference should be irrelevant. If it is not, then this is suggestive of an improper rejection founded on hindsight.

<sup>1</sup> Applicants respectfully inquire how can one can discuss the references without first looking at what they say individually and then determining what these individuals teachings, taken as a whole would teach the person skilled in the art?

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The Examiner argues that a prima facie case of obviousness is presented because there is allegedly a reason to put the phosphorous compounds of Fuhr into the composition of Yamamoto. This alleged reason, as explained on Page 7 of the Examiner's Answer is "addition of phosphorous compound by itself still results in significant improvement of flame retardant properties." The basis for this statement in the references is not identified. The Examiner states that Fuhr teaches that the phosphorous compound alone is not sufficient based on Comparative Examples 1 and 2 in Table 3. There is no example in Fuhr, however, that shows the properties of the polycarbonate composition without one of the silicone or the phosphorous compounds and thus no basis for the Examiner's statement that the phosphorous compound alone provides a benefit with respect to flame retardance.

The Examiner does refer to the teachings of Yamamoto which show that a composition consisting of polycarbonate (CE6) burned as the apparent basis for this argument. However, Applicants point out that the comparative composition of Fuhr are not 100% polycarbonate. This being the case, the Examiner's argument is not a valid comparison, since there is no information as to the flame-retardant properties of a mixture of polycarbonate, SAN and ABS.

With regard to the argument of unexpected results, the Examiner asserts that "the applicants should have compared the compositions of Yamamoto lacking the phosphorous compound with the claims compositions that result in (sic, from?) the addition of the phosphorous compound to the compositions of Yamamoto. As the Examiner acknowledges, Comparative Example 7 in the specification is an example in which a silicone as claimed is used without phosphorous, and it shows an unacceptable V2 flame rating with a long (150 sec) burn time. This silicone is within the general scope of the siloxane of Yamamoto. There is no other Example from Yamamoto that could be tested because Yamamoto does not disclose the addition of phosphorous compounds. The additional tests using the Fuhr silicone, show that the nature of the silicone that is combined with the phosphorous compound makes a difference, and that the same type of result is not obtained when the wrong silicone is used (Declaration examples). These tests taken together show that the combination of the claimed invention reflects a special

combination of components, whose properties could not be predicted based on the prior art. Thus the combination of the invention is not obvious.

The Examiner also argues that the showing does not establish unexpected results because only high levels of phosphorous compound are tested: 3 ppm in the case of the tests in the specification, and 4 pph in the case of the comparison with the Fuhr compositions as reported in the declaration. The Examiner argues that there is no showing of unexpected results across the entire claimed range, particularly with lower levels of phosphorous compound and silicone, and that the evidence therefore is not commensurate in scope with the claims. (Examiner's Answer, Pages 10 and 11). Applicants submit that this argument, which was made by the new Examiner in the Examiner's Answer and not by the previous Examiner. Paralleling the decision of the Federal Circuit in *In re Soni*, 34 USPQ 2d 1684, 1688 (Fed. Cir. 1995), this argument is improperly raised at this stage in the proceedings without reopening prosecution and giving Applicant an opportunity to amend the claims and/or submit additional evidence.

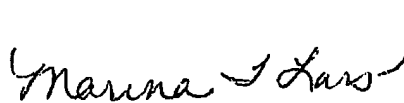
More significantly, however, the Examiner's argument is one based solely on a comparison of numbers, without any reasoned comment on why the materials tested would not be deemed representative. It is noted that the claimed range for the amount of phosphorous compound used in the reported testing are at the lower end of the range said to be suitable in Fuhr (Col. 3, line 1), yet they produce excellent results. A person skilled in the art would appreciate that the very short burn times reported in the results suggest that lower levels than those tested will also offer similar benefits. Similarly, the amount of silicone is comparable to the amount of silicone disclosed in Yamamoto. (Col. 3, line 4). Thus, a person skilled in the art would have no reason not to believe that the unexpected results obtained using a Yamamoto-type silicone instead of a Fuhr-type silicone would not be obtained over the range of claims concentrations.<sup>2</sup>

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<sup>2</sup> This is not to say that the absolute magnitude of the flame-retardance achieved would not be likely to go down with decreasing concentration, but rather that the benefits of using one silicone over the other would be retained over the concentration range.

For the foregoing reasons, Applicants submit that the rejection of claims 1-21 under 35 USC § 103 should be reversed. In the alternative, Applicants request that the case be returned to the Examiner for proper presentation of arguments concerning the sufficiency of the evidence presented in a non-final action, to which Applicants will have the opportunity to make appropriate response.

Respectfully submitted,



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